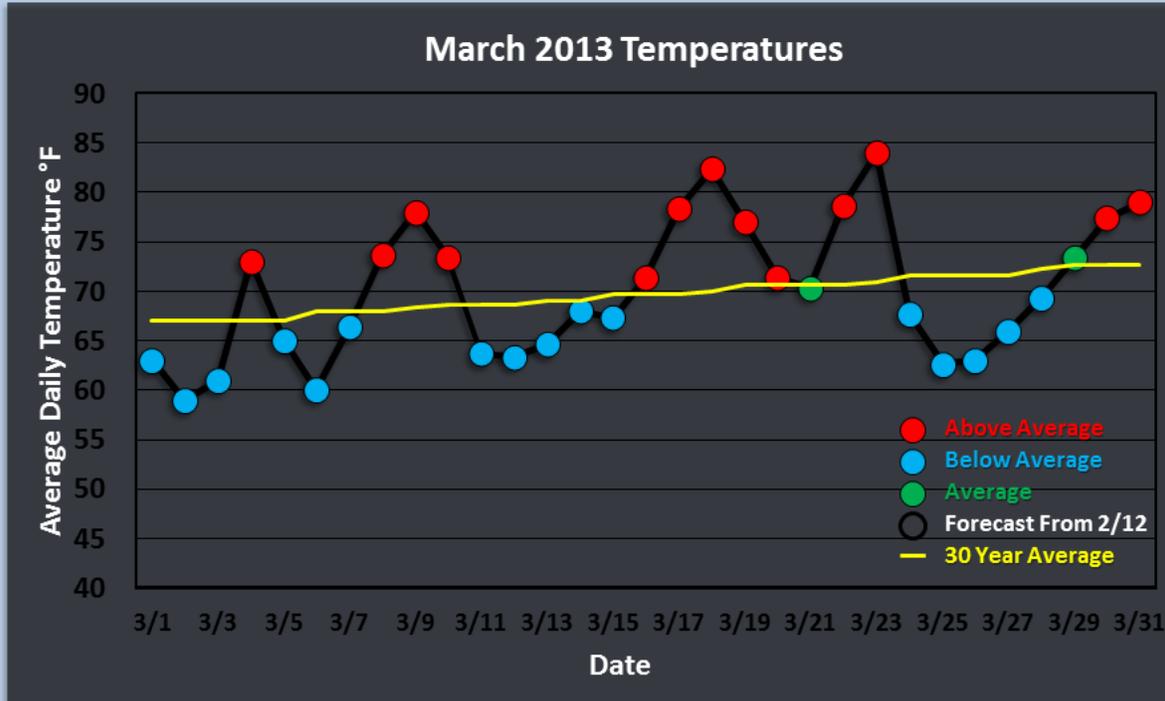




Closer to Normal in the RGV?

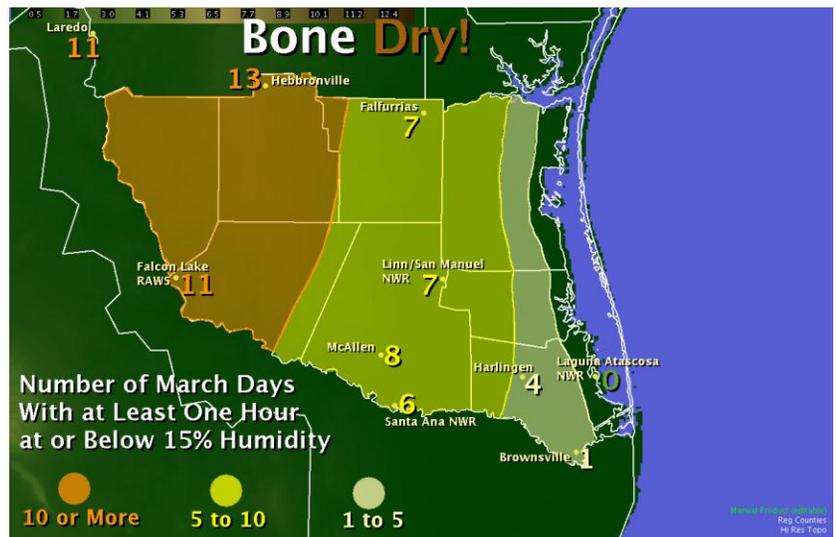


March “Springs” Back to Normal...

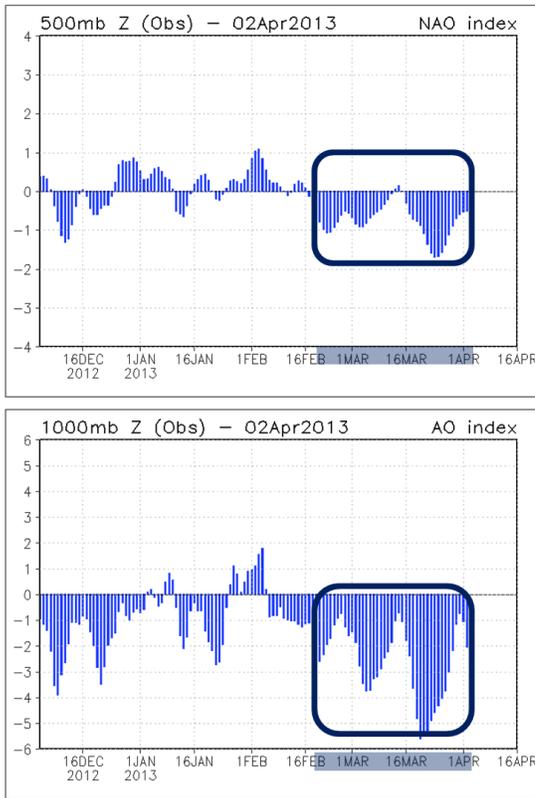
...But Temperature Streaks Continue as Month Goes out like Lamb

Drought Tightens Grip With Little Rainfall and Very Dry Conditions Across Valley

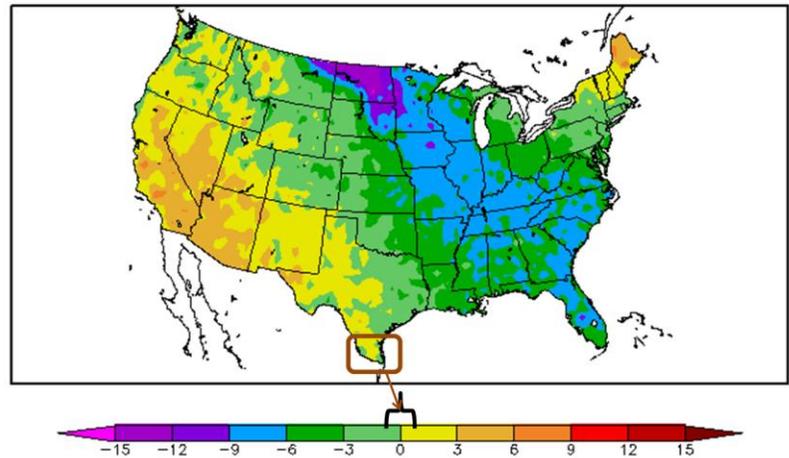
The first month of boreal spring (March) “acted” like it should, temperature-wise, across the RGV. Breezy to windy days were common; the average wind speed at Harlingen’s Valley International Airport was 13 mph, punctuated by gusts above 40 mph on March 4th-5th, 9th-10th, and 24th. Cooling fronts were common, and often preceded by heat spikes. The first big heat spike and 100°F day across the mid and upper Valley occurred on March 18th; a second event followed on March 23rd. Each front was followed by stiff north to northwest winds which crashed humidity below 15 percent nearly everywhere west of Highway 281. In fact, a whopping 42% (13 of 31) of days near Hebbronville, and 35% (11 of 31) of days along the river near Falcon Dam had at least an hour of afternoon humidity at or below 15 percent! Common low humidity periods included the 1st through 4th, 10th – 12th, and 24th – 25th. As of this writing, there were no known large wildfires – perhaps a combination of high vigilance by local



officials/residents and the lack of fine fuels (grasses) from Hidalgo and Brooks westward, where much of the ground had literally turned to dust by the first week of the month.



Departure from Normal Temperature (F)
3/1/2013 - 3/31/2013



Generated 4/2/2013 at HPRCC using provisional data.

Regional Climate Centers

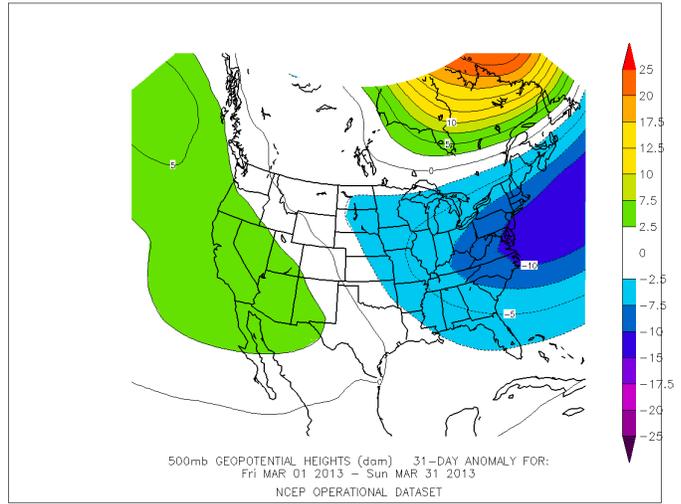
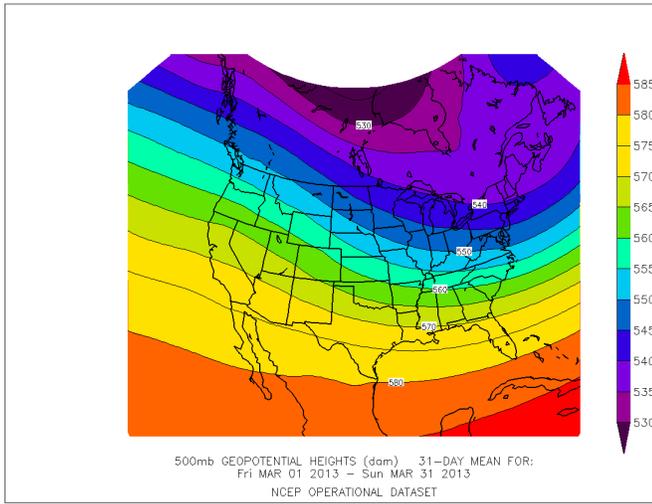
Temperatures: Above Average Streak Barely Hangs On

March came within two calendar days of ending multi-year streaks of above average temperature, at least for the Lower and Mid Valley. Sultry nights and warm humid days on the 30th and 31st brought mean values just over their 30-year averages (1981-2010). McAllen surged to 0.5°F above the long term average (71.3° vs. 70.8°); Harlingen/cooperative (Calendar Month) eased to the same marker (69.4° vs. 68.9°). One could say Brownsville beat average in a “photo finish”: The month averaged 69.258°, just .007 (or 7 thousandths) a degree above the benchmark of 69.251°!

Blame it on AO/NAO? The chart shown above (left) shows an impressive negative phase of the Arctic Oscillation (AO, bottom). In fact, the AO has been in negative phase for nearly the entire period since winter 2012/2013 began (December). Negative phase AO *sometimes* correlates to the temperature pattern shown (above, right), but correlates with more certainty to the temperature departures when sharply negative and combined with a negative phase the closely related North Atlantic Oscillation (NAO). Texas often falls on the demarcation line of cooler vs. warmer than average temperatures during negative to strongly negative AO/NAO combinations, all things being equal. The phase of the El Niño/Southern Oscillation can force additional temperature departures. For example, combining an El Niño (“warm” phase of ENSO) with the negative AO/NAO combination virtually guarantees a cold and wet situation in south Texas.

The neutral-leaning-cool phase of ENSO combined with the sharply negative phase of the AO/NAO to shunt rainfall well northeast of the Valley and keep a fast pace to atmospheric weather systems. This pace allowed all fronts to surge, rather than ease, through the region and never allowed deep atmospheric moisture to build. Paltry rainfall totals – just a trace at several locations, mainly from McAllen to Falcon Dam, was the result.

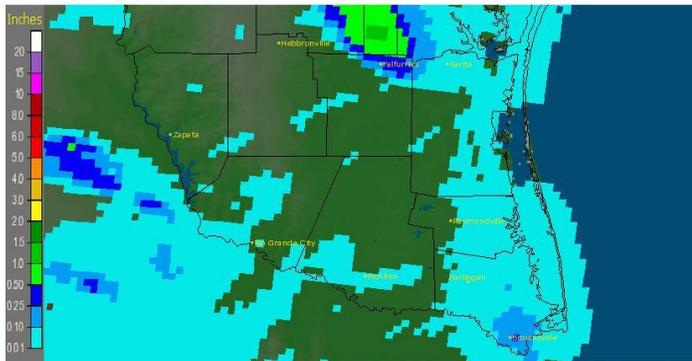
The steering pattern and departure from average (top of next page) were a direct result of the AO/NAO negative phase combination and the weakly cool ENSO phase. Sharp negative departures from average resulted in a chilly March for the east coast and record cold for parts of Western Europe.



Rainfall: No

Other than spotty streamer showers and sprinkles across the Lower Rio Grande Valley, and a sole decaying supercell that dropped a little more than a third of an inch of rain and golf ball sized hail in Falfurrias just before midnight on the 31st, rain was non-existent in March 2013. Lack of rainfall and numerous bone dry days worsened conditions, and the month ended with the entire region in Extreme (D3) to Exceptional (D4) Drought.

Brownsville, TX (BR0): March, 2013 Monthly Observed Precipitation
Valid at 4/1/2013 1200 UTC- Created 4/2/13 19:53 UTC



Brownsville, TX (BR0): March, 2013 Monthly Percent of Normal Precipitation
Valid at 4/1/2013 1200 UTC- Created 4/2/13 20:03 UTC



Above Left: Estimated rainfall (or lack of) across the Rio Grande Valley and Deep South Texas. **Right:** Percentage of average rainfall for March, 2013. Blob in Brooks county (top of image) was from decaying supercell. Pockets of light rain in Cameron County were from low topped showers caused by interaction of weak upper level disturbance with pooled moisture near the coast on March 8th.

End of March 2013 Drought Monitor

